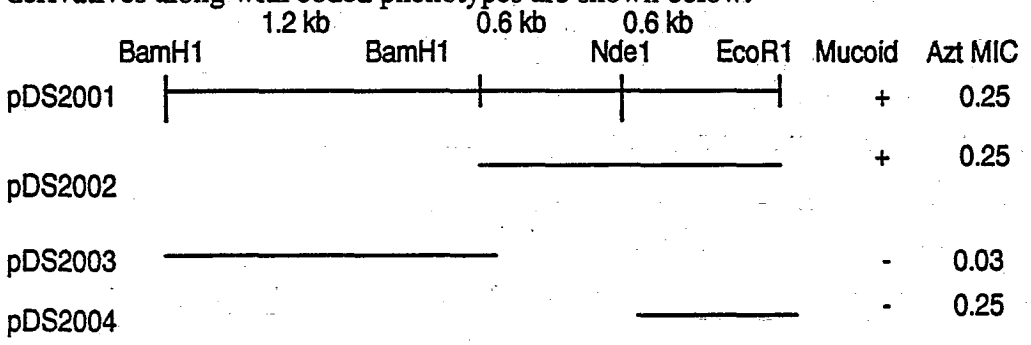
The *aztA* gene codes low-level resistance to aztreonam. R.A. Bonomo, C. Dawes and D.M. Shlaes*. Research Service, Dept. of Veterans Affairs Med Ctr and Dept. of Medicine, Case Western Reserve University, Cleveland, OH

During a search for mutations of a plasmid-mediated class A *B*-lactamase yielding resistance to oximinocephalosporins and *B*-lactamase inhibitors, we discovered a mutation that mapped in the *E. coli* host (HB101) chromosome. A partial *sau*3A digest of genomic DNA of HB101 AZT5-2, bearing an extended spectrum *B*-lactamase, was used to prepare a library in pBCSK-. *E. coli* DH5α transformants were screened on agar containing aztreonam. All transformants had a mucoid phenotype. One was chosen for characterization that contained a circa 2.5 kb insert (pDS2001). A restriction map of this fragment and its deletion derivatives along with coded phenotypes are shown below.



The 629 bp insert of pDS2004 has been preliminarily determined and codes two open reading frames, almost completely overlapping, in opposite orientations of about 240 bp each. ORF2 shows 68% DNA homology with the *rcsB* gene of *Klebsiella pneumoniae*, but no significant homology at the protein level. A variety of experiments suggest that the insert does not code a *B*-lactamase, and does not alter OMP or PBP expression. We have tentatively designated the gene coded by pDS2004 *aztA*.

Source: https://www.industrydocuments.ucsf.edu/docs/thmv0000